

Riverside and San Bernardino County Sheriffs

Departments

Proposal for Biometric Identification System Upgrade

Phase 1: Jail Intake and Out-processing

Version 1.02

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1. Context and Purpose

1.1. Background

Riverside and San Bernardino County Sheriffs' Departments (RSBCSD) are discussing with Tascent the potential of replacing its existing identification system, IBIS, to assist the Sheriffs' departments with identification workflows in four contexts:

1. Static fingerprint check against CAL-DOJ, FBI RISC, and local Automated Fingerprint Identification System (AFIS) to support local jail intake (in-processing of prisoners);
2. Static fingerprint check against local AFIS, and in rare cases CAL-DOJ and FBI RISC, to support out-processing of prisoners from local jails;
3. "Small Jail" processing, which permits operators to do both in-processing and out-processing;
4. Mobile fingerprint check against CAL-DOJ and FBI RISC.

RSBCSD has approached Tascent because its existing IBIS system is degraded and needs to be replaced. Tascent met with RSBCSD in July 2018 to discuss requirements for the new system.

Note that RSBCSD has indicated that jail intake and out-processing, and Small Jail processing are the priority operations for this roll out. For that reason, this document focuses on Jail intake and out-processing (items 1, 2, and 3 above).

1.2. Document Purpose

The purpose of this document is to outline RSBCSD's operational requirements for its identification system replacement.

1.3. References

For background information on Tascent's ongoing collaboration with RSBCSD on the Mobile Identification pilot project, please refer to the following documents:

- *SBCSD Pilot - Scope Definition - 20160106 001*
- *RSBCSD Tascent ES 20180702 001*

2. System overview

2.1. System Architecture

The RSBCSD CAL-ID Biometric Identification system functional and logical architecture is as follows:

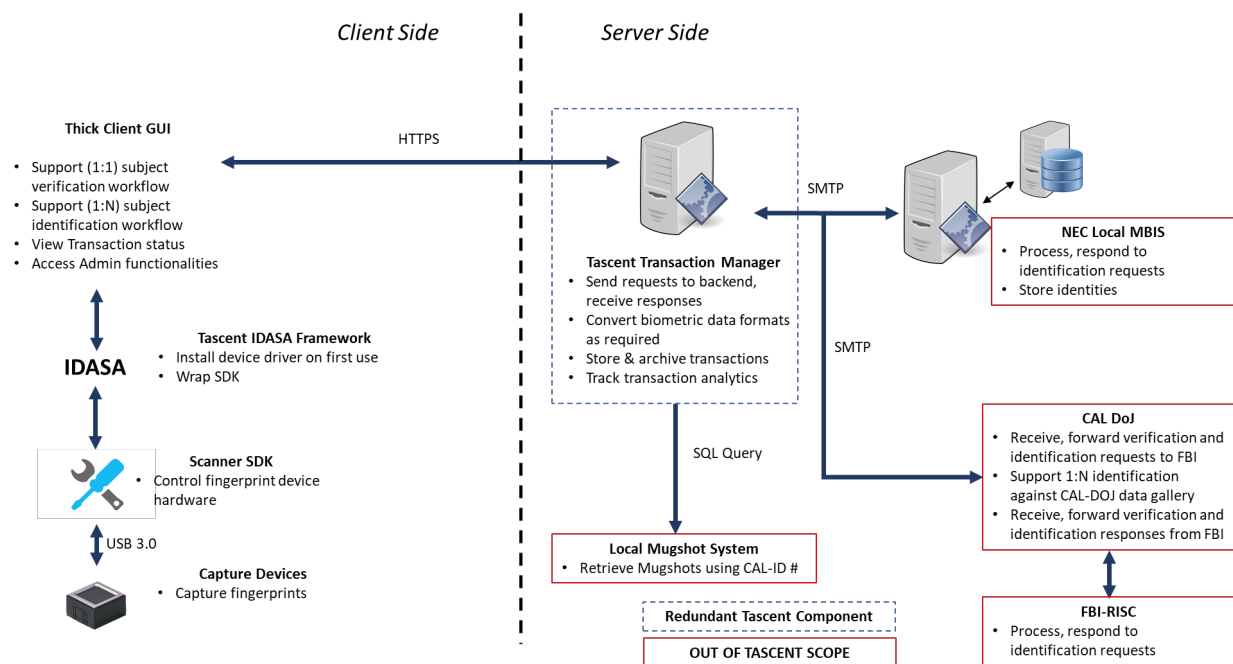


Image 1 – CAL-ID Functional Biometric System Functional Architecture

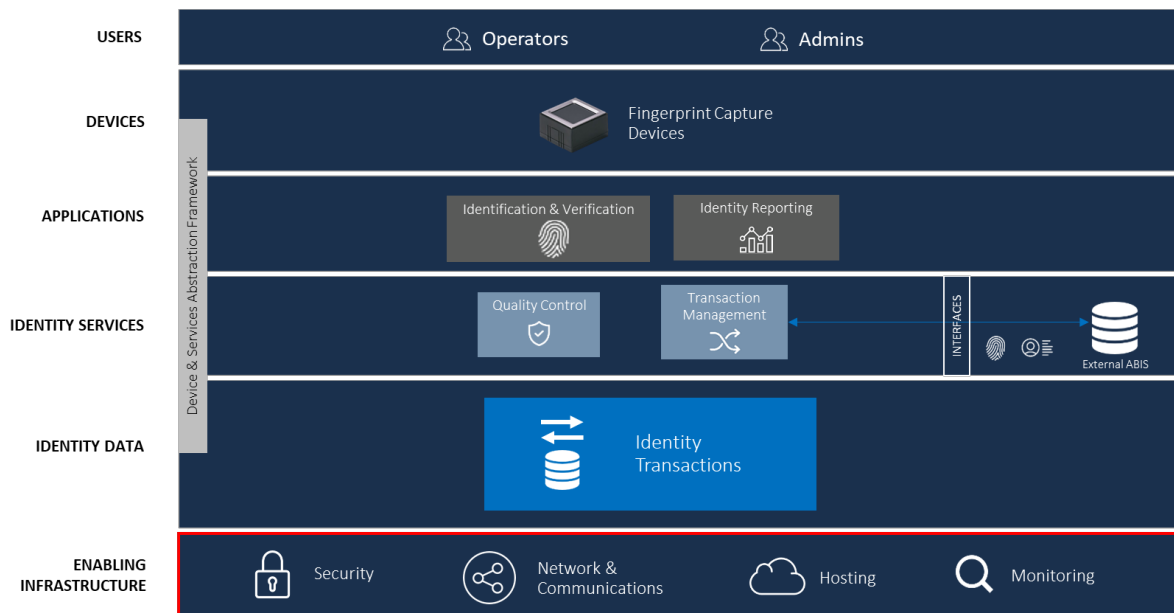


Image 2 – CAL-ID Functional Biometric System Logical Architecture

OUT OF TASCENT SCOPE

3. Workflows

RSBCSD has noted that its Biometric Identification System must initially support two workflows: Jail Intake and Jail out-processing. Small-jail processing simply gives operators the option of performing intake or out-processing.

These workflows are detailed below, along with RSBCSD's functional requirements.

3.1. Jail Intake/In-processing

In-processing at Jails is the process whereby a RSBCSD operator, often a sworn Sheriff's deputy, performs an identification of a subject who is going to be placed in Jail. San Bernardino Sheriff's Department typically processes about 200 intakes a day, and Riverside Sheriff's Department typically processes 150 subjects a day. To keep this intake process short and easy-to-perform, operators typically perform the following actions:

1. Log-in using Employee last name and employee number as a credential¹, which takes operators to the Transaction Summary screen
2. Begin a new identification transaction;
3. Capture fingerprints and submit them for a local Automated Fingerprint Identification System (AFIS) identification, a California Department of Justice (CAL-DOJ) identification, and a Federal Bureau of Investigation (FBI) Repository of Individuals of Special Concern (RISC) identification.
4. Optionally, view a magnified captured print
5. Receive and view identification results
6. Print out a report of identification results

RSBCSD operators can perform these actions by interacting with four screens, which are presented below.

¹ Note that Riverside Sheriffs currently do not log in to the system per-use, but it is expected they will do so

3.1.1. Log in Screen requiring UserID

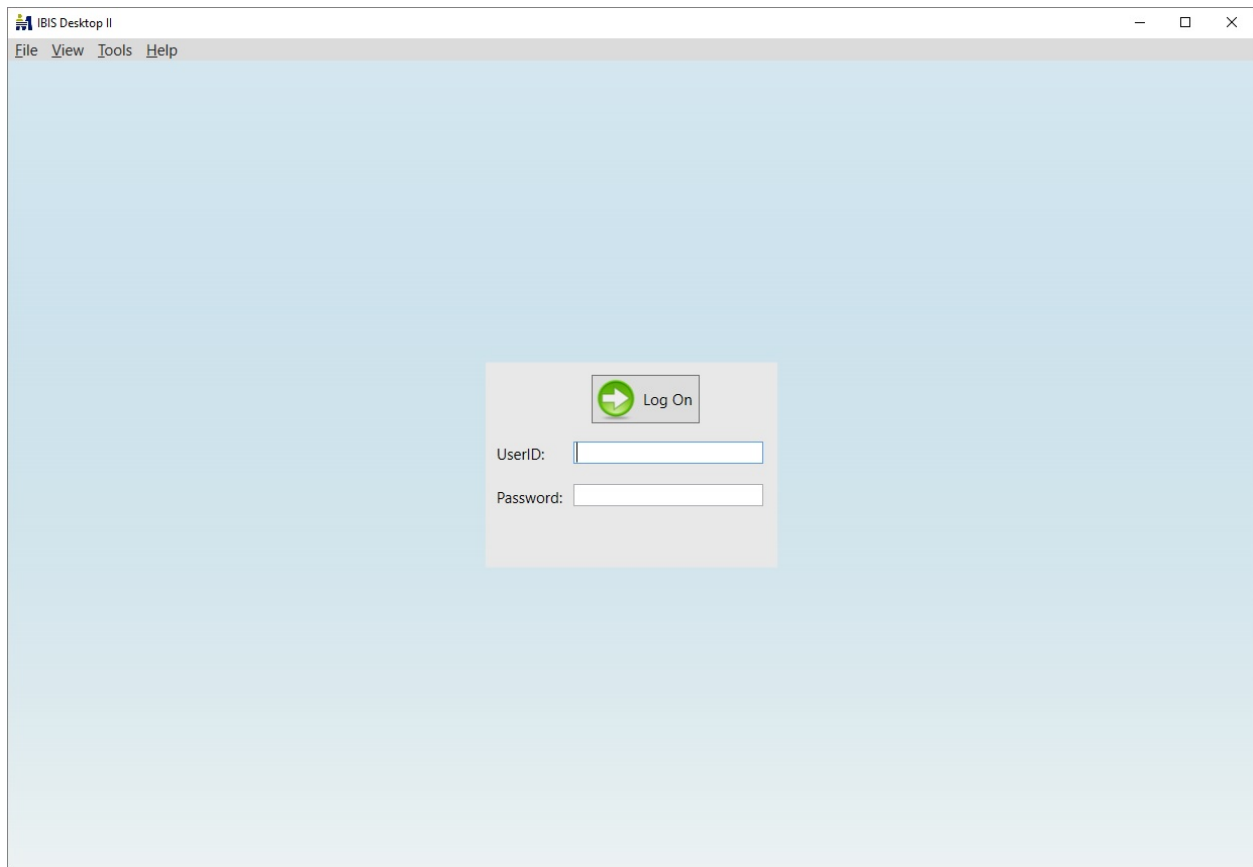


Figure 1: Log-in screen for in-processing and out-processing

Log-in is typically alphabetic, and Password is numeric.

3.1.2. Transaction Summary Screen

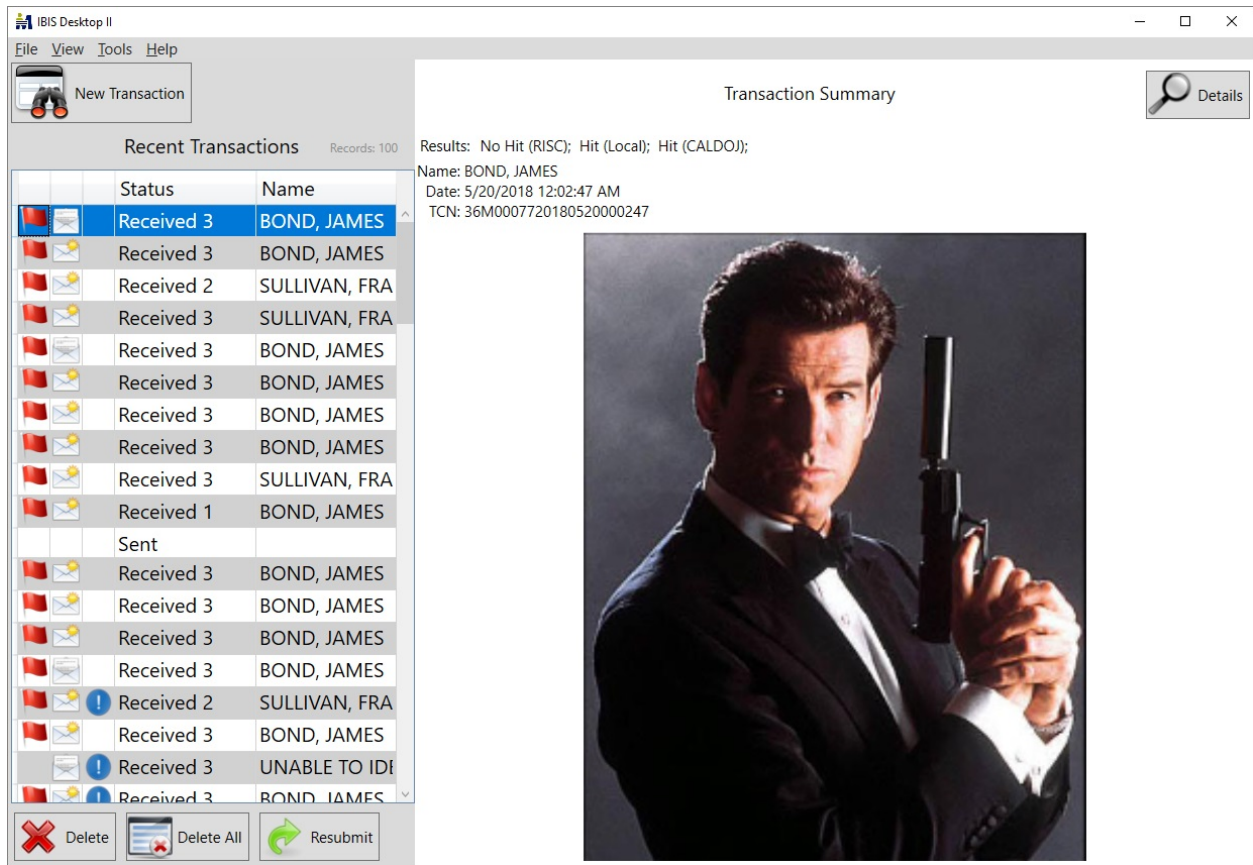


Figure 2 – Existing Transaction Summary Screen

The Transaction summary screen enables officers to:

- Initiate a new fingerprint capture and identify request;
- View up to 100 previous transactions, in order from most recent to least recent, showing the Subject Name and the Status of the transaction (Left Pane);
- View Summary of the highlighted transaction (Right Pane). Note that the summary displays:
 - Results—shown as “Hit” or “No Hit” from FBI (“RISC”), Local AFIS (“Local”), CAL-DOJ (CALDOJ)
 - Subject Name as operator entered it
 - Date/Time of transaction
 - Transaction Number (TCN);

- Select/highlight a Transaction (a returned identification request) to view by either double-clicking on a transaction in the left pane or selecting “Details” in the upper right pane;
- Resubmit a previously-sent transaction
- Delete one or all previous transactions.

A transaction can have one of three statuses:

- Sending
- Sent
- Received

3.1.3. Capture Screen

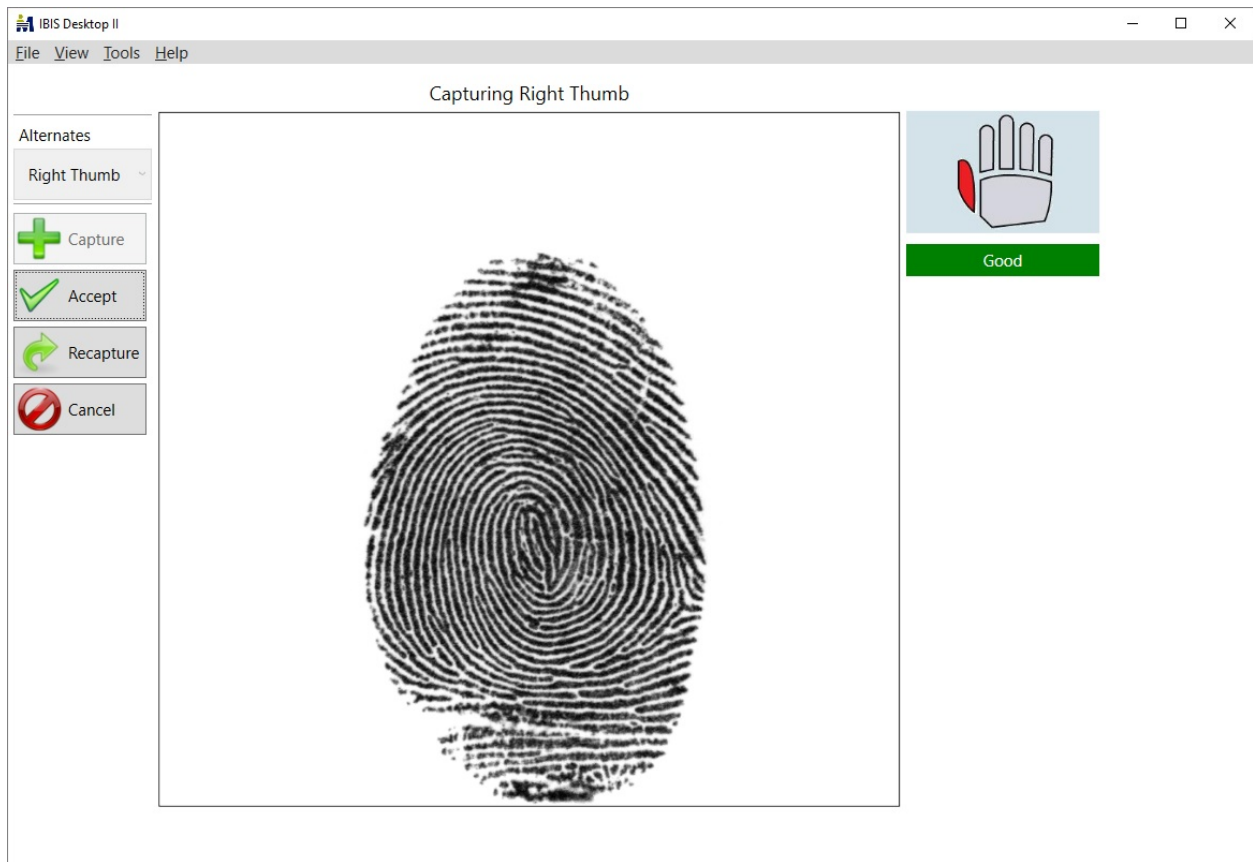


Figure 3 – Capture Screen

Pressing “New Transaction” on the Transaction Summary screen brings operators to the capture screen. The capture screen enables operators to:

- Initiate capture of finger prints
- Review captured prints

- Accept or Reject captured prints

Note the hand in the upper right screen highlights which print is being captured, as well as which prints have been captured already.

3.1.4. Identification Results Detail Screen

Figure 4 – Identification Results screen

Selecting “Details” on the Transaction Summary screen will bring up the results from the three agencies that received a query – FBI-RISC, Cal-DOJ, and MBIS. This screen will display results in the form they are received from the submitting agency.

Note the following:

- FBI generally does not send a photo; CAL-DOJ sometimes sends a photo; and Local MBIS almost always sends a photo;
- Operators can use this screen to print a report. This report format is displayed below.
- Operators can select a captured print at the top of the screen to magnify its size for

inspection.

3.1.5. Biometric Identification Summary Report







Biometric Identification Summary Report	
	<div>Left Thumb</div>  <div>Right Thumb</div> 
TCN: 36M0007720180520000247 Date/Time: 5/20/2018 12:02:50 AM	
Entered Demographics Name:	
Report Number: CAL-ID:	
Result 1	
	Received: 5/20/2018 12:03:59 AM Result: Hit (Local) Name: BOND, JAMES DOB: 1917-01-01 CAL-ID: 360665353 SID/CI: S0000000 FID/FBI: F0000000 Comment:
Result 2	
	Received: 5/20/2018 12:03:27 AM Result: No Hit (RISC) Name: DOB: RISC CONTACT: Run a CLETS inquiry against data received from the FBI's RISC to determine any possible holds
<small>Comment: This response is based on a search of only the repository for individuals of special concern and does not preclude a record from existing in other biometric or name based repositories. Users are permitted to rely on the RISC response in conjunction with other law enforcement tools but shall not rely solely on the RISC response for additional law enforcement action.</small>	
Result 3	
	Received: 5/20/2018 12:08:33 AM Result: Hit (CALDOJ) Name: SULLIVAN, FRANK D DOB: 1983-05-05 SID/CI: 0022914116 Comment:

Figure 5 – Existing Identification Results PDF

3.1.6. Jail Intake Functional Requirements

Intake	Req Title	Description
1.1	LDAP integration	As part of supporting log-in, the system must be integrated with the Sheriff's existing LDAP server.
1.2	View previous transactions	Operators should be able to display the 100 most recent transactions on the left panel of the Transaction Summary Screen, descending in order from most to least recent.
1.3	Capture of two prints	The system will require the capture of two prints. It will default to prints 1,6 (thumbs) but enable officers to select other prints to capture via UI.
1.4	Auto-capture of fingerprint	The system should perform an auto-capture of the print once the application determines the print on the sensor meets acceptable quality criteria. <i>Criteria triggering auto-capture TBD.</i>
1.5	Live-streaming of the fingerprint capture process	As the fingerprint is being captured, the UI should display a live-stream of the fingerprint capture process.
1.6	Display quality of fingerprint after capture	The system UI should display the fingerprint quality of each captured print in the capture screen on the following scale: Good (green), Fair (Yellow), Poor (Red). <i>Thresholds and quality scale TBD.</i>
1.7	Change status messaging for transactions	Rather than showing "Sending;" "Sent;" "Received", the transaction status should show "Searching Local;" "Searching DOJ/FBI" and "Hit", "No Hit", "Timeout."
1.8	Make timeout a configurable setting	As described.
1.9	Prevent resubmit while polling	If the system is polling for results, operators must be prevented from resubmitting the request to local/state/ federal databases. This is to prevent the system from spamming the relevant identity systems.
1.10	Permit resubmit only on timeout x3	Officers should only be able to resubmit an identification request if the system has timed out on all three databases.
1.11	Check Local MBIS before submitting to CAL-DOJ/FBI	CAL-DOJ/FBI policy generally forbids sheriffs' departments from submitting identification requests from jails. Therefore, the system should only submit an identification request to CAL-DOJ and FBI if it receives no match or no response from the local MBIS after three minutes.
1.12	Submit TFS ToT, receive TFR ToT	The system's submissions must conform the TFS ToT and accept the TFR ToT. <i>FBI EBTS version TBD.</i>
Technical Reqs	Req Title	Description
1.13	Throughput	The system will support a throughput of 350 intakes per day.

3.2. Jail Out-processing

Out-processing occurs when a prisoner is being released, whether permanently or temporarily (For example, because the sentence has been served, or because the prisoner is participating in a work-release program).

While the out-processing UX and screens are similar to jail intake, the two workflows vary in a few key ways:

- After logging in via the same means as in jail intake, operators are then taken to the transaction summary screen.
- Selecting “New Transaction” brings up a screen requesting a CAL-ID number. (*This number is retrieved manually from a paper manifest and entered via UI. Retrieval of the number is out of Tascent Scope*)
- The CAL-ID number is sent to the local AFIS system to retrieve the prisoner’s enrolled record.
- The operator is then automatically routed to the capture screen, which looks identical to the capture screen at jail intake.
- After capturing the requested prints—defaulting to prints 1 and 6—the system compares the probe to the enrolled prints.
- Match results are then provided to the operator.
- The system then sends an MSSQL query to the CAL-ID mugshot system. This SQL query uses the CAL-ID number to retrieve the mugshots.
- Prisoners’ identity is thus confirmed and the prisoner is manually signed out. (*Manual sign-out is out of scope*)
- Note the system will not query CAL-DOJ or FBI at out-processing unless the 1:1 match returns a “no-match” result.

3.2.1. Out-processing Functional Requirements

The functional requirements for out-processing are noted below. Note that many are similar to functional requirements for intake.

Intake	Req Title	Description
2.1	1:1 search	The system will perform a 1:1 match of the subject’s fingerprints against the retrieved enrollment record, provided by the local AFIS system.
2.2	1:N search if no 1:1 match	<p>If the system does not return a 1:1 match at out-processing, the system will present operators with the option of performing a 1:N search. This can be done by presenting a pop-up button giving operators the option once 1:1 returns a no match.</p> <p>If the operator selects the 1:N search option, it will follow the same workflows as jail intake—search local AFIS first, then CAL-DOJ/FBI if no response after three minutes.</p>
2.3	LDAP integration	As part of supporting log-in, the system must be integrated with the

		Sheriff's existing LDAP server.
2.4	CAL-ID number	The system will provide a screen requesting the operator to enter a CAL-ID number.
2.5	Retrieval of enrollment record	Once the number is entered, the system will query the local AFIS system for the prisoner record.
2.6	Retrieval of mugshot	Once the number is entered, the system will send an MS SQL to the mugshot system to retrieve the mugshot record.
2.7	View previous transactions	Operators should be able to display the 100 most recent transactions on the left panel of the Transaction Summary Screen, descending in order from most to least recent.
2.8	Capture of two prints	The system will require the capture of two prints. It will default to prints 1,6 (thumbs) but enable officers to select other prints to capture via UI.
2.9	Auto-capture of fingerprint	The system should perform an auto-capture of the print once the application determines the print on the sensor meets acceptable quality criteria. <i>Criteria triggering auto-capture TBD.</i>
2.10	Live-streaming of the fingerprint capture process	As the fingerprint is being captured, the UI should display a live-stream of the fingerprint capture process.
2.11	Display quality of fingerprint after capture	The system UI should display the fingerprint quality of each captured print in the capture screen on the following scale: Good (green), Fair (Yellow), Poor (Red). <i>Thresholds and quality scale TBD.</i>
2.12	Change status messaging for transactions	Rather than showing "Sending," "Sent," "Received", the transaction status should show "Searching Local," "Searching DOJ/FBI" and "Hit", "No Hit", "Timeout."
2.13	Make timeout a configurable setting	As described.
2.14	Prevent resubmit while polling	If the system is polling for results whether performing a 1:1 or 1:N search, operators must be prevented from resubmitting the request to local/state/ federal databases. This is to prevent the system from spamming the relevant identity systems.
2.15	Check Local MBIS before submitting to CAL-DOJ/FBI (1:N)	If the operator performs a 1:N search at out-processing, the system should only submit an identification request to CAL-DOJ and FBI if it receives no match or no response from the local MBIS after three minutes.
2.16	Submit TFS ToT, receive TFR ToT	The system's submissions must conform the TFS ToT and accept the TFR ToT. <i>FBI EBTS version TBD.</i>
Technical Req	Req Title	Description
2.17	Throughput	The system should support up to 850 out-processing requests per day.

3.3. Small Jail Processing

Small Jail processing provides operators at small jails the ability to choose to perform either jail intake, or jail out-processing. Once a workflow is selected, there is no difference between the from the intake or out-processing workflows described above.

4. Device Management

RSBCSD will deploy up the application on up to 900 workstations throughout Riverside and San Bernardino Counties. RSBCSD will need a lightweight Device Management capability to manage assignation of device IDs and software updates. The requirements related to device management are noted below.

Device Mgmt	Req Title	Description
3.1	Thick Client	The system application will be deployed as a thick client installation package onto roughly 900 terminals
3.2	Assign device IDs	The system central server must assign unique 5-digit station IDs to roughly 900 intake/outtake stations.
3.3	Software Updates	Device manager must be able to auto-deploy system updates to all stations.

5. Reporting Requirements

RSBCSD has to report statistics to its oversight board (RAN Board) in order to track system usage. The relevant requirements are noted below.

Reporting	Req Title	Description
3.1	Reporting Details	The system must collect currently collected data to support current RAN Board reporting requirements (See Appendix for a description of the format and the data collected).

6. Other System Requirements

Other	Req Title	Description
4.1	Retain information for two years	The system must store a record of all transactions covering two years. This includes the biometric and biographic data, as well as event metadata.
4.2	High Availability	The system must support high-availability architecture (assume 99.99%) for Riverside and San Bernardino (two physical locations). Active-passive configuration is required.
4.3	Peak Throughput	The system must be able to support up to 50 transactions per hour, or 1200 per day.
4.4	MSSQL/Mugshot	The local mugshot system data is stored in MSSQL databases. The system must be able to directly query this MSSQL database and receive a response.

7. Future Phases

The following features are out of scope for the first phase of this project.

- Mobile identification—identification of subjects by deputies in the field using mobile fingerprint/iris devices.
- Integration with the existing Jail Information Management System (JIMS).

8. Appendix – Reporting Format

The format for the RSBCSD report to its RAN board is usually provided as a table, shown below.

Tascent’s role in supporting generation of this report is to collect, store, and aggregate the data so that RSBCSD can create a report.

SBC	1:N Transactions	Local Hits	CAL-DOJ Hits	RISC Hits	No Hits	1:1 Transactions
RC	1:N Transactions	Local Hits	CAL-DOJ Hits	RISC Hits	No Hits	1:1 Transactions

RSBCSD reports are typically broken into two rows. One row represents San Bernardino Sheriff’s Department statistics, and the second row represents Riverside County Sheriff’s Department statistics.

RSBCSD must be able to collect the following statistics from the transaction manager:

- **The number of 1:N transactions for each department over a given timeframe.** For the scope of this project, these transactions occur during jail intake, and if a 1:1 comparison does not occur during out-processing. This would also include mobile transactions should the program expand.
- **The number of successful matches on the local AFIS system resulting from a 1:N search over a given timeframe, whether at intake or out-processing.**
- **The number of successful matches from CAL-DOJ resulting from a 1:N search over a given timeframe, whether at intake or out-processing.**
- **The number of successful matches on FBI RISC resulting from a 1:N search over a given timeframe, whether at intake or out-processing.**
- **The number of no-hits over a given timeframe.**
- **Finally, the number of 1:1 transactions performed over a given timeframe.** For the scope of this project, 1:1 transactions will occur primarily at out-processing.